

What is claimed is:

1. A massage machine comprising a physiological sensor for detecting physiological data of a person to be massaged and a control circuit for controlling a massage operation based on the physiological data detected by the physiological sensor, the control circuit comprising psychological state estimating means for estimating a psychological state of the person to be massaged based on the physiological data detected by the physiological sensor by an execution of a preliminary massage and massage operation adjusting means for adjusting a full massage operation in accordance with the estimated psychological state, the preliminary massage being performed by one typical massage movement from among a plurality of kinds of message movements to be performed for the full massage to detect variations of the physiological data.

2. A massage machine according to claim 1 wherein one kind of massage movement is selected as the one typical massage movement so as to produce a psychological state which is closest to a state wherein all of the plurality of kinds of message movements to be performed for the full massage are consecutively performed.

3. A massage machine comprising a physiological sensor for detecting physiological data of a person to be

massaged and a control circuit for controlling a massage operation based on the physiological data detected by the physiological sensor, the control circuit comprising psychological state estimating means for estimating a  
5 psychological state of the person to be massaged based on the physiological data detected by the physiological sensor by an execution of a preliminary massage and massage operation adjusting means for adjusting a full massage operation in accordance with the estimated psychological  
10 state, the person to be massaged being given a massage therapy by alternately repeating the preliminary massage and full massage.

4. A massage machine according to claim 3 wherein the preliminary massage is performed by one typical massage  
15 movement from among a plurality of kinds of massage movements to be performed for the full massage to detect variations of the physiological data.

5. A massage machine according to claim 4 wherein one kind of massage movement is selected as the one typical  
20 massage movement so as to produce a psychological state which is closest to a state wherein all of the plurality of kinds of massage movements to be performed for the full massage are consecutively performed.

6. A massage machine according to claim 3 wherein one

time preliminary massage is executed by performing massage operations on all parts to be massaged for the full massage.

7. A massage machine according to claim 3 wherein one time preliminary massage is executed by performing a  
5 message operation on one of all parts to be massaged for the full massage, and a part to be massaged is switched every preliminary massage.

8. A massage machine according to claim 3 wherein one time full massage is executed by performing all of the  
10 plurality of kinds of massage movements to be executed for the full massage.

9. A massage machine according to claim 3 wherein one time full massage is executed by performing one kind of massage movement from all of the plurality of kinds of  
15 message movements to be executed for the full massage, and a kind of massage movement is switched every full massage.

10. A massage machine comprising a sensor for detecting physiological data of a person to be massaged, the massage machine for performing a massage operation by  
20 moving massage balls based on a detected value of the sensor, the massage machine comprising:

means for performing a preliminary massage operation for an area to be massaged,

means for estimating a position of an area to be massaged

and of shoulders, back, and/or waist, and a position of a point of Shiatsu, i.e., a point which is to be given Shiatsu or finger pressure therapy, within each area to be massaged,

5 means for judging sensation of stiffness for each said area to be massaged based on a value of the sensor detected when the preliminary massage operation is performed for each said area to be massaged,

means for judging sensation of stiffness for each point  
10 of Shiatsu based on a value of the sensor detected when the preliminary massage operation is performed for each point of Shiatsu within each said area to be massaged, and

means for performing a massage operation for each point of Shiatsu based on the sensation of stiffness judged for  
15 each said area to be massaged, and the sensation of stiffness judged for each point of Shiatsu within each said area to be massaged.

11. A massage machine according to claim 10 wherein when the judging result of sensation of stiffness is a  
20 specified result in the case where the preliminary massage operation is given to each point of Shiatsu within each said area to be massaged, a stronger massage operation is performed than a massage operation determined based on the judging result of sensation of stiffness in the event of

the preliminary massage operation given to each said area to be massaged.

12. A massage machine comprising a sensor for detecting physiological data of a person to be massaged, the massage machine for performing a massage operation by moving massage balls based on a detected value of the sensor, the massage machine comprising:

means for performing a preliminary massage operation for areas to be massaged with a gentler movement of the massage balls than said movement of the massage balls based on the value detected by the sensor,

means for judging sensation of stiffness for each said area to be massaged based on a value of the sensor detected when the preliminary massage operation is performed for each said area to be massaged, and

means for performing the massage operation based on the detected sensation of stiffness.

13. A massage machine for performing a massage operation by moving massage balls which are movable in circular or elliptical orbit forward, rearward, leftward, and rightward relative to a body of a person to be massaged, the massage machine performing a massage operation so as to reciprocatingly move the massage balls in orbit which is a part of the circular or elliptical orbit and which

protrudes against the body of the person to be massaged.

14. A massage machine for performing a massage operation by moving massage balls which are movable in circular or elliptical orbit forward, rearward, leftward,  
5 and rightward relative to a body of a person to be massaged, the massage machine performing a massage operation so as to reciprocatingly move the massage balls in orbit which is a part of the circular or elliptical orbit and which is recessed from the body of the person to be massaged.

10 15. A massage machine for performing a massage operation by moving massage balls which are movable in circular or elliptical orbit forward, rearward, leftward, and rightward relative to a body of a person to be massaged, the massage machine selectively performing:

15 a massage operation for reciprocatingly moving the massage balls in orbit which is a part of the circular or elliptical orbit and which protrudes against the body of the person to be massaged, and

a massage operation for reciprocatingly moving the  
20 massage balls in orbit which is a part of the circular or elliptical orbit and which is recessed from the body of the person to be massaged.

16. A massage method for a massage machine to perform a massage operation, the massage machine for moving massage

balls based on a value detected by a sensor for detecting physiological data of a person to be massaged, the massage method having:

5 a step of performing a preliminary massage operation for an area to be massaged and of shoulders, back and/or waist, with a gentler movement of the massage balls than said movement of the massage balls based on the value detected by the sensor,

10 a step of estimating a position of an area to be massaged and of shoulders, back, and/or waist, and a position of a point of Shiatsu, i.e., a point which is to be given Shiatsu or finger pressure therapy, within each area to be massaged,

15 a step of judging sensation of stiffness for each said area to be massaged based on a value of the sensor detected when the preliminary massage operation is performed for each said area to be massaged,

20 a step of performing the preliminary massage operation for each point of Shiatsu within each said area to be massaged with a gentler movement of the massage balls than said movement of the massage balls based on the value detected by the sensor, and judging sensation of stiffness for each point of Shiatsu based on a detected value of the sensor, and

a step of performing a massage operation for each point of Shiatsu based on the sensation of stiffness judged for each said area to be massaged, and the sensation of stiffness judged for each point of Shiatsu within each said  
5 area to be massaged.

17. A massage method for a massage machine to perform a massage operation, the massage machine for moving massage balls based on a value detected by a sensor for detecting physiological data of a person to be massaged, the massage  
10 method having:

a step of performing a preliminary massage operation for an area to be massaged and of shoulders, back and/or waist, with a gentler movement of the massage balls than said movement of the massage balls based on the value detected  
15 by the sensor,

a step of estimating a position of an area to be massaged and of shoulders, back, and/or waist, and a position of a point of Shiatsu, i.e., a point which is to be given Shiatsu or finger pressure therapy, within each area to be  
20 massaged,

a step of judging sensation of stiffness for each said area to be massaged based on a value of the sensor detected when the preliminary massage operation is performed for each said area to be massaged,

a step of performing the preliminary massage operation for each point of Shiatsu within each said area to be massaged with a gentler movement of the massage balls than said movement of the massage balls based on the value  
5 detected by the sensor, and judging sensation of stiffness for each point of Shiatsu based on a detected value of the sensor,

a step of performing a massage operation for each point of Shiatsu based on the sensation of stiffness judged for  
10 each said area to be massaged and the sensation of stiffness judged for each point of Shiatsu within each said area to be massaged,

a step of performing a loosening-up movement for each said area to be massaged in its entirety after completion  
15 of the massage operation for each point of Shiatsu within each of the areas to be massaged, and

a step of performing a loosening-up movement for an area including each of the areas to be massaged after completion of the massage operation for each point of Shiatsu within  
20 each said area to be massaged.

18. A massage method according to claim 17 wherein the preliminary massage operation is performed as a rubbing movement for reciprocatingly moving the massage balls forward, rearward, leftward, and rightward in orbit which

is a part of circular or elliptical orbit and which is recessed from a body of the person to be massaged.

19. A massage method according to claim 17 wherein the preliminary massage operation is performed as a  
5 loosening-up movement for reciprocatingly moving the massage balls forward, rearward, leftward, and rightward in orbit which is a part of circular or elliptical orbit and which protrudes against a body of the person to be massaged.

20. A massage method according to claim 17 wherein  
10 when the judging result of sensation of stiffness is a specified result in the case where the preliminary massage operation is given to each point of Shiatsu within each said area to be massaged, a stronger massage operation is performed than a massage operation determined based on the  
15 judging result of sensation of stiffness in the event of the preliminary massage operation given to said each area to be massaged.

21. A massage method for a massage machine to perform a massage operation, the massage method having  
20 a step of performing a massage operation for a plurality of areas to be massaged, and  
a step of performing a massage operation for the plurality of areas, and thereafter performing a gentler massage operation for an area including the plurality of

areas than said message operation.